

REMARKS

Applicant thanks the Examiner for the very thorough consideration given the present application.

Claims 1, 4 and 6-15 are now pending in this application. Claims 1 and 13 are independent. Claims 4, 8 and 11 have been amended.

Reconsideration of this application, as amended, is respectfully requested.

Reasons for Entry of After Final Amendment

The Examiner is respectfully requested to enter the present amendment, as it should place the application into condition for allowance.

The specification has been amended to correct a grammatical informality on page 6. Further, grammatical informalities were corrected in claims 4, 8 and 11. It is respectfully submitted that these changes do not impact the scope of the claims, and should not raise new issues.

Rejection Under 35 U.S.C. § 102

Claims 13 and 14 stand rejected under 35 U.S.C. § 102(e) as being clearly anticipated by Shimizu et al. This rejection is respectfully traversed.

Shimizu et al. disclose injecting an inert gas to purge a reactive gas in a reaction chamber where wafers are treated. The wafers are cleaned and dried by rotating the wafers in the flow of the inert gas. Shimizu et al. state "[t]he use of such a gas prevents the atmosphere from being caught in the rotation of

the wafers at the subsequent cleaning and drying steps, thereby preventing the occurrence of a water mark on the surface of the semiconductor wafers." See col. 4, lines 15-20 and 41-49.

Shimizu et al. state that the prior art suffered a drawback in the "conventional spin dry process," wherein the rotating mechanism used in the process produced a dust which contaminated the wafers. A further drawback was that the high speed of rotation of the rotating mechanism caused the atmosphere (e.g. contaminated air) to be drawn into the rotating wafers, which caused undesirable watermarks.

The invention of Shimizu et al. concerns rotating the wafers "in" the flow of the inert gas. The flow of the inert gas "feeds" the draw of the rotation and hence prevents the atmosphere from being drawn into the rotating wafers due to their rotation speed. Based upon this understanding, it can be seen that the "atmosphere" (e.g. contaminated air) must be present inside the chamber. If the atmosphere were not present in the chamber, then the wafers could be rotated at a high speed with do danger of watermarks, since there would be no atmosphere present in the chamber to be drawn into the rotating wafers. Therefore, it appears that Shimizu et al. is allowing the atmosphere to enter into the chamber along with the flow of inert gas to replace and purge the reactive gas.

The present invention is quite distinct from the arrangement of Shimizu et al. The method recited in Applicant's claim 13 includes "withdrawing said treatment gas from said chamber while injecting the moisture displacing gas

into said chamber and preventing atmospheric air from entering the chamber." This method is not shown or suggested by Shimizu et al., since atmosphere is obviously present in the chamber and must be kept from entering the rotating wafers by having the rotation of the wafers occur within the flow of the inert gas.

For the reasons stated above, reconsideration and withdrawal of this rejection are respectfully requested.

Allowable Subject Matter

Applicant thanks the Examiner for the indication that claims 1-4 and 6-12 are allowed. Further, Applicant thanks the Examiner for the indication that claim 15 would be allowable if rewritten in independent form.

CONCLUSION

All of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider all presently outstanding rejections and that they be withdrawn.

It is believed that a full and complete response has been made to the Office Action, and as such, the present application is in condition for allowance.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Mr. Scott L. Lowe (Reg. No. 41,458) at the telephone number of the undersigned below, to

conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and further replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17; particularly, extension of time fees.

Respectfully submitted,

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